

Patent Application
NC 84,352

Amendments of the Claims:

This listing of claims will replace all prior vesions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended) A product that is essentially devoid of a sintering aid and its components comprising spinel that has porosity of less than 0.2 %, is transparent to light having wavelengths in the range of ~~0.4-5.5~~ 0.3-5.5 microns and having transparency in excess of 50 % for a thickness of 1 mm, has uniform properties, its spinel grains are within about 300% of the size of an average grain and is devoid of grains larger than about 1 mm ~~and is devoid of grains of exaggerated size.~~

Claim 2 (canceled)

Claim 3 (canceled)

Claim 2 (canceled)

Claim 4 (currently amended) The product of claim ~~3~~ 1 devoid of grains of exaggerated size having transparency of at least 60 % for a 1 mm thickness at a wavelength of 4 microns ~~and the spinel said product~~ is a hard crystalline solid selected from the group consisting of oxides of magnesium and aluminum.

Claim 5 (currently amended) The product of claim ~~2~~ 1 having transparency of at least 60 % for a 1 mm thickness at a wavelength

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of 4.0 μm and the spinel is a hard crystalline solid MgAl_2O_4 .

Claim 19 (new): A magnesium aluminate spinel sintered product that is essentially devoid of a sintering aid and its components, that has porosity of less than 0.2%, has uniform grain size wherein the grains are less than 300% of the average grain size and is devoid of grains larger than about 1mm.

Claim 20 (new): The product of claim 19 having transparency in excess of 50 % for a thickness of 1 mm to light of 0.3-5.5 μm wavelength.

Claim 21 (new): The product of claim 19 having transmission of at least 60% through a thickness of 1 mm at a wavelength of 4 μm .